



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,493	10/15/2003	Osamu Takagi	016887-1099	3503
22428	7590	09/11/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				LEUNG, PHILIP H
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/684,493	TAKAGI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Philip H. Leung	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 14 June 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 35-57 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 35-57 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

1. In view of the supplemental amendment filed 6-14-2006, the application is being withdrawn from issue and the prosecution is reopened.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 35-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation “each of the grooves being formed on a surface of the core and runs along a longitudinal direction of the core, the two grooves being placed so as to be opposed to each other in a direction perpendicular to the longitudinal direction of the core” at lines 6-9 of claim 35 appears to be contradicting as the limitation requires the grooves be along a longitudinal direction of the core and also perpendicular to the longitudinal direction of the core”.

Clarification and correction are required.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 42, 43, 45, 50, 51 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Sano et al (US 5,970,299) (newly cited).

Sano shows a fixing device 100 comprising: a heating roller 1 made of a magnetic metal; a coil 3, 3a comprising a plurality of wires; an exciting circuit (not shown but inherently required) that applies a high-frequency current to the coil; and a core 4 which is arranged inside the heating roller, the core having at least one groove 4a, 12a, 13a, 14a, 14b wherein the groove extends between end portions of the core so as to connect the end portions in a longitudinal direction of the core, and a part of the coil is buried in the groove (see various embodiments as shown in Figures 1 and 9-17; col. 4, line 58 – col. 9, line 67 and col. 11, lines 22-31). In regard to claims 43 and 51, the magnetic core portions 4b and 4c are the claimed guide projections. In regard to claims 45 and 53, the core portions 4b and 4c are also the claimed neck projections.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 35, 41, 44, 46-49, 52 and 54-57 are rejected under 35 U.S.C. 103(a) as being obvious over by Sano et al (US 5,970,299), in view of Morigami (US 5,768,673).

As set forth above, Sano shows every feature as claimed except for the details of the drive mechanism of the heating roller. Morigami shows that it is well known in the art of induction fusing rollers to use sliding bearings and a drive gear in order to rotate the induction

Art Unit: 3742

heating roller 10 (see Figure 1 and col. 4, lines 36-45). It would have been obvious to an ordinary skill in the art at the time of invention to modify Sano to provide sliding bearings at both ends of the roller and use a drive gear to rotate the heating roller for better rotation control of the roller, in view of the teaching of Morigami. In regard to claims 35 and 41, as far as the claims are understood, the exact location and structure of the grooves would have been a matter of engineering expediencies depending on the overall structure of the roller, the core and the coil.

8. Claims 36-40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H. Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571)-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Philip H Leung  
Primary Examiner  
Art Unit 3742

P.Leung/pl  
9-4-2006